



A warm greeting to all CSSS members.

The warmth is from both the weather (as we start to see the blooms in many parts of the country) and your President of 2022. It's been almost a decade and half I have been involved in the soil's community (studies and then work), but for those who don't me, my name is Asim Biswas. I am writing this from Guelph (close to Toronto yet far) and currently working at the University of Guelph. With me, the council is presented by an amazing team. I would like to thank the continuing council members including Angela Bedard-Haughn (Past President), Lee-Anne Nelson (Secretary), Diane Knight (Treasurer), Anne Naeth (Journal Editor), Louis-Pierre Comeau (Easter Councillor) and Erika Young (Student Representative). I would like to send a special welcome to Amanda Diochon from Lakehead University, who has returned to the council as the President-elect and Henry Chau from Agriculture and Agri-Food Canada, Lethbridge who joined us as the Western Councillor. Also, it is a homecoming for Henry who has been working with our soil science colleagues in Australasia at Lincoln University for the past decade. With this, I can't send enough thanks to Richard Farrell (outgoing western councillor) from the University of Saskatchewan and Nathan Basiliko (outgoing past-president) from Laurentian University. Your efforts and initiatives have greatly supported many activities. With the support from this amazing team of council members, we are hoping to make this a milestone year for our society for many reasons. It's been already more than two long years and we are getting tired with COVltigue (Covid Fatigue). However, we are all here together and doing our part to keep us and everyone around us safe and healthy. At the same time, I am more than excited to see you all (most of you) in-person in Edmonton for our Annual Meeting (in association with Alberta Soil Science Workshop). Still with travel restrictions in many organizations and workplaces, we are going to miss several of our colleagues, while hoping to meet them virtually for the first-ever hybrid conference. We had a very successful first virtual conference last year after a year of cancellations. We are going to make this years' meeting double exciting with new hybrid option. This year, we have a line up of 4 Plenary speakers and almost 200 amazing presentations. We have a day-long mid-conference field trip and a longer post-conference field trip, and several workshops scheduled at the end of the conference. A special thanks to the organizing team and their sleepless nights to prepare this. It is going to be an exciting annual meeting. Along the preparation for the Annual Meeting, our society is bidding to host the world congress of Soil Science in 2030. We are looking forward to welcoming the world of soil scientists to Canada in 2030. We have great support from the other national societies around the world and a range of organizations across Canada.

On another note, in the recent years, we have been seeing many uncertain situations for study, work, and soil science research around the world and we, together, would like to express our collective shock and dismay at the appalling actions unfolding at different corners of the world. Our societies mission is not political, yet we pledge our unwavering support to the peoples of those affected areas and sovereign countries.



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President's Message (Con't.)

On a more positive note, I am sure you have seen and accessed the society's soil science textbook published online last December. The French translation of the book is underway. I know many soil science teachers are already using the book and have strong positive responses. Also, as the spring is well upon us, I hope the field season is shaping up well for everyone. It will be an exciting field season as well after 2 years of covid restrictions. In preparation of this, don't forget to attend the Annual meeting at Edmonton. Looking forward to seeing you all there.

Asim Biswas, CSSS President

CSSS Pedology Committee

Hello CSSS Members,

As you may be aware, the Pedology Committee is leading the development of the 4th Edition of the Canadian System of Soil Classification. Over the past 12 months, we have been working with the Canadian Journal of Soil Science on a special issue focused on Advances in Soil Survey and Classification in Canada, for which the closing date for submissions was February 28th, 2022. The special issue was a conduit for pedologists to propose significant changes to our taxonomic system, so watch for these in the coming months. In addition, the Pedology Committee also wishes to collate a list of other less significant issues and revisions to the CSSC. As such, we ask that if you have revisions to the 3rd edition that you have noted in your copy of the manual, scribbles or highlights of inconsistencies or spelling errors, that you please share these using the Microsoft Forms link below.

We ask submitters to identify their proposed change as either "Major" or "Minor", and feel we should elaborate on this one question by providing examples.

Examples of minor changes:

1. Spelling errors (e.g., page 105, the footer has a spelling error, "soizl")
2. Sentence structure/syntax errors
3. Small inconsistencies (e.g., page 63, Diagnostic horizons are not underlined for Orthic Brown Chernozem subgroup).

CSSS Pedology Committee (Con't.)

Examples of major changes:

1. Subgroups are not presented in the same order as the Soil Key throughout the manual and should be re-ordered to match the key
2. Chapter 17, Terminology for Describing Soils, references a supporting document which is out-of-date, this section should be revised and updated
3. Chapter 16, Correlation of Canadian taxonomy with other systems – this section requires a complete re-write to account for changes in other systems since 1998

<https://forms.office.com/Pages/ResponsePage.aspx?id=KRLczSqsI0u3ig5crLWGXOejPTpLT7FKnW8J5Xs7V2BUNTgzV004T0JBOFNKTFhEWTZHUIBMUNJRI4u>

The Pedology Committee and the Soil Classification Working Group thank you in advance for your contributions. Please share with colleagues who may not be members of the CSSS but are practicing soil scientists with interest in soil taxonomy. For more information, please contact any of the executive of the Pedology Committee.

Student Photo Contest

Are you a student interested in visually projecting your research? Do you have interesting and memorable research photos you would like to share? Then look no further as the CSSS is accepting submissions for the Canadian Journal of Soil Science (CJSS) student photo contest. The CJSS is a quarterly journal and one photo will be selected for each issue.

Deadlines for submission are January 25, April 25, July 25, and October 25.

All submissions must meet the following specifications:

- Image should focus on some aspect of soil science to reflect CJSS content.
- Image size and resolution must be at least 8.5" x 11" **at 300 dpi or higher**.
- Cell phone photographs are acceptable as long as they meet the above criteria.
- No collages; one single image only.
- Image in focus and not blurry.
- Image must not include people.
- No manipulation or heavy editing of image required.
- Acceptable image formats are jpg, png, or tif.

Students may submit more than one image per competition and may enter more than one competition.

All entries should be sent to:

M. Anne Naeth (anaeth@ualberta.ca) and Erika H. Young (ehyoung@grenfell.mun.ca).

The next deadline for submission is **April 25, 2022**.

The top submission will receive a **\$125** cash prize and the winning photograph will be featured on the cover of the Canadian Journal of Soil Science and on the CSSS website.

CJSS Photo Submissions

If you are interested in submitting photos for consideration by the CJSS as an issue cover or as advertising material but not as part of the student photo contest please send directly to M. Anne Naeth (anaeth@ualberta.ca). Any interested party can submit images provided that the images meet the criteria

Positions / Opportunities

PhD Student Opportunity – University of Toronto & University of Melbourne

A new PhD student position is available through a new joint program at the University of Toronto and the University of Melbourne to study the integrative assessment of microplastics pollution in soil. More details about the project are available here: <https://research.unimelb.edu.au/research-at-melbourne/toronto/joint-phd-opportunities/integrative-assessment-of-microplastics-pollution-in-soil>

The PhD student will spend 2 years at the University of Toronto (under the supervision of Prof. Myrna Simpson) and then 2 years at the University of Melbourne (under the supervision of Prof. Suzie Reichman). Demonstrated experience in the environmental sciences with emphasis on environmental chemistry and/or soil chemistry is preferred. Previous experience in analytical chemistry and/or ecotoxicology is an asset but not required.

Students interested in this program can contact Prof. Myrna Simpson (myrna.simpson@utoronto.ca) directly. Application review will begin in early March 2022 with a start date of September 1, 2022

Intermediate Soil Scientist and Soil Technician

At WSP, we're continuing to grow and develop our expertise in Earth and Environment, operating as a trusted advisor and technical expert on engineering design challenges for our clients across multiple industries. Our team is growing, and as a result we're adding a **Soil Scientist and Soil Technician** to our group. As part of the Ecology & EIA team in Alberta and British Columbia, you'll be responsible for driving forward our ambitious plans to enhance our Environmental service offering in the province through your work with a close-knit team of engineering specialists, professionals, and technical staff.

Soil Technician <https://phe.tbe.taleo.net/phe02/ats/careers/v2/viewRequisition?org=WSP&cws=59&rid=19141>

Soil Scientist <https://phe.tbe.taleo.net/phe02/ats/careers/v2/viewRequisition?org=WSP&cws=59&rid=19139>

Research Scientist Position: Soil Carbon

Falmouth, MA, US

Desired Start Date: April 30, 2022

https://workforcenow.adp.com/mascsr/default/mdf/recruitment/recruitment.html?cid=29ee31bb-d8c5-4350-a136-327f9d9a68bc&cclid=19000101_000001&jobId=435144&lang=en_US&source=CC4

SUMMARY: The Soil Carbon Lab at Woodwell is seeking an early career scientist to support existing projects and to continue to expand our world-class research program. We study the role soils play in exacerbating or mitigating climate change; we seek to unravel the complexity of the soil carbon cycle; we study the intersection of soil health, food security and climate mitigation; we build low-cost tools to monitor soil carbon sequestration, we provide advice on best practices for utilizing soil carbon as a climate mitigation strategy.

The ideal candidate will have the ability to work across scales from the pedon to the globe applying a mix of field, laboratory, and computer simulation methods. You will be able to apply and communicate basic insights from soil science and biogeochemistry to the critical applied question of how we can better manage soil to meet sustainable development goals. You will collaborate inclusively with Woodwell scientists, the broader scientific and conservation communities, and private sector companies to provide the knowledge and tools necessary to implement nature-based climate mitigation strategies.

Positions / Opportunities (Con't.)

Research Scientist Position: Soil Carbon (Con't.)

Responsibilities:

50% - lead Woodwell's engagement on a multi-year multi-stakeholder longitudinal impact assessment of Community Managed Natural Farming in Andhra Pradesh, India. You will represent Woodwell in this partnership, mentor graduate students at Tufts University, oversee field and laboratory work focused on agronomic, soil health and climate mitigation outcomes, lead data analysis and reporting. 25% - oversight and management of various lab-based research projects. These projects include soil health assessments, studies of carbon sequestration in croplands, leading indicators of carbon change, understanding of soil carbon fractions, and soil spectroscopy. 25% - grant writing to build research program

Desired Qualifications and Experience:

PhD in Soil Science or related discipline and at least 2 years of postdoctoral or similar experience in a related field

Experience with designing and executing field soil and plant sampling campaigns

Understanding of soil health and how land management can impact soil health

Understanding of soil carbon and GHG dynamics

Demonstrated familiarity with common soil analyses

Demonstrated data analysis, synthesis, data visualization and paper writing skills

Experience and success with grant writing and fundraising

Soft skills: project management, organization, leadership, being able to represent Woodwell and the Soil

New Author Resource from Canadian Science Publishing

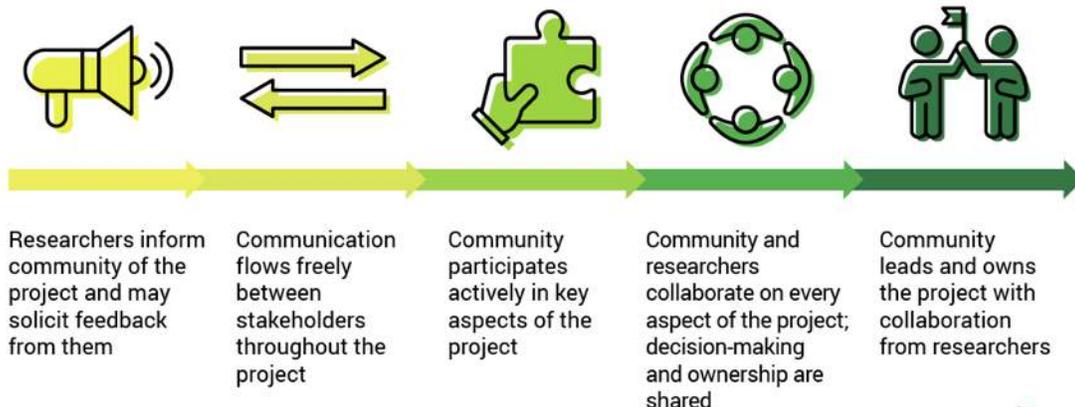


New guidelines for reporting community-engaged research in manuscripts

Canadian Science Publishing, publisher of the [Canadian Journal of Soil Science](#), is excited to share guidelines to help researchers report community-engaged

research in manuscripts. Researchers can use these guidelines to help demonstrate how the community was involved throughout the research process and how the study benefits the community. [View the new guidelines](#).

Level of community engagement



Upcoming Conferences


www.som2022.org

8th International Symposium on Soil Organic Matter

June 26 (Sun) ~ 30 (Thu), 2022
Grand Walkerhill Seoul • Seoul, Korea



Call for Papers

The SOM 2022 congress welcomes submission of full-length research papers to be peer-reviewed and presented at the SOM 2022 which will be held at Grand Walkerhill Seoul, Korea from **June 27 (Mon) to 29 (Wed), 2022.**

• **Congress Theme** • SOM in the Anthropocene

Important Dates

| | |
|----------------------------------|-------------------------|
| • Submission Due | January 17 (Mon), 2022 |
| • Submission Due (Extended) | February 28 (Mon), 2022 |
| • Notification of Review Results | March 14 (Mon), 2022 |
| • Presenter's Registration Due | April 29 (Fri), 2022 |
| • Early Registration Due | May 13 (Fri), 2022 |
| • Regular Registration Due | June 20 (Mon), 2022 |

Session Topics

The Effect of Climate Change on Soil Functions/Services

1. Land Use & Climate Changes on SOM Dynamics
2. Impact of Climate Change on Soil Microbial-Plant Interactions
3. Vulnerability and Dynamics of Deep SOM Stocks

Farming Systems and Soil Organic Matter Dynamic, Storage and Sequestration

4. Rice Paddies: Impact of Anthropocene on SOM Dynamics
5. Links between SOM & Nutrient Cycling
6. Carbon Neutral & Negative Emission

Biological, Physical, and Chemical Controls on Soil Organic Matter in Agroecosystems

7. Living Part of SOM - Soil Organisms
8. Physical & Biogeochemical Reaction of SOM
9. Soil Quality & Health

Digging Deeper into Persistent of Soil Organic Carbon Stocks, Novel SOM Component

10. Regeneration of SOM with New Resources: Biochar or Artificial Organic Sources
11. Impact of (Micro-) Plastics as Exotic Source on Soil Environments
12. Blue Carbon: Terrestrial, Deep & Extreme Ecosystems

Innovative Methods and MRV Tools: Benefits and Limitations

13. Qualifying, Quantifying & Visualizing SOM
14. SOM Modelling, Mapping & Tracing
15. SOM with Artificial Intelligence: Big data, Engineering & Remote Sensing

Special Program

Young Scientist Session

Confirmed List of SOM 2022 Special Issues

Journals below have agreed to publish a Special Issue of SOM 2022 free papers. More details on special issues will be provided after the symposium.



Special Issue Topic
Microbial Control of Soil Organic Matter Dynamics: Effects of Land Use and Climate Change

Biology and Fertility of Soils
Impact Factor 6.432



Special Issue Topic
Soil Organic Matter in the Anthropocene: Its Role in Climate Change Mitigation and Food Security

Agriculture, Ecosystems & Environment
Impact Factor 5.567



Special Issue Topic
Towards a Mechanistic Understanding of the Role of SOM in Global Regenerative Farming Practices

European Journal of Soil Science (EJSS)
Impact Factor 4.949

Hosted by



한국토양비료학회
Korean Society of Soil Science and Fertilizer

SOM 2022 Secretariat • info@som2022.org

CSSS Newsletter

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March 2022

Upcoming Conferences (Con't.)

People & Soil - Global soil governance: Status and future perspectives

Online workshop 25 August 2021

One of the core mandates of the Global Soil Partnership (GSP) of the Food and Agriculture Organization of the United Nations (FAO) is to improve soil governance at all levels, providing support for countries in strengthening normative and regulatory frameworks with an impact on soil management. As such, FAO's GSP organized the webinar "Global soil governance: Status and future perspectives" within the framework of the EUROSOIL 2021 conference, which took place on 25th August 2021 in a virtual mode.

Soil governance involves policies, strategies, and the processes of decision-making by nation states and local governments on how the soil is utilized. Governing the soil requires international, national and local collaboration between governments, local authorities, industries and citizens. This is to ensure the implementation of coherent policies that encourage practices and methodologies that regulate the usage of the soil resource to avoid degradation and conflict between users.

The webinar had many eminent speakers with experience on soil governance at different levels. They addressed what was happening at the present time in terms of global and regional soil governance and proposed actions to ensure that sustainable soil management could be successfully promoted and adopted.

<https://www.fao.org/global-soil-partnership/resources/highlights/detail/en/c/1459432/>



2022 CSSS Annual Meeting

Soil Science for Sustainable Development May 23 – 27, 2022.

<https://csss-assw2022.ca/>

The 2022 CSSS Annual meeting will be jointly held with the Alberta Soil Science Workshop (ASSW) in Edmonton, on the University of Alberta campus. The meeting dates are May 23-27. The conference will be delivered in a hybrid format.

Early bird registration for the 2022 CSSS-ASSW joint conference is open. The early bird registration rate is available until April 15th. Online registration is available here <https://csss-assw2022.ca/register.html>. More information about the conference will be posted on the website as it becomes available.



Should you have any questions about this conference, please feel free to contact the Conference Co-Chairs, Drs. Scott Chang Scott.Chang@ualberta.ca and Symon Mezbahuddin Symon.Mezbahuddin@gov.ab.ca.

We look forward to seeing you in Edmonton in May 2022.

The 2022 CSSS-ASSW Organizing Committee

Upcoming Conferences (Con't.)

22nd World Congress of Soil Science

Soil Science – Crossing Boundaries, Changing Society 31 July – ...



The 22nd Congress is being organised by the British Society of Soil Science on behalf of the International Union of Soil Sciences.

The Congress theme, 'Soil Science – crossing boundaries, changing society' focuses on the link between soil and society, with sessions covering soil systems, soil processes, soil management and how we interact with and use soils around the world.

There will be opportunities for specialist workshops and discussion sessions across a wide range of soil disciplines. The core programme is supported by tours and a cultural and arts programme for delegates and the wider public to explore our diverse environment and culture.

At a time of global concern for our planet and its growing population, managing our soils sustainably has never been as important. 90% of our food comes from soil, as does all of our timber and other fibre. Soil, and the ecosystems it supports, have a huge role in mitigating against climate change, is a vast reservoir of biodiversity, plays a significant role in flood management and contains key evidence of past civilisations.

Our understanding of the importance of these functions is developing rapidly and the Congress provides the ideal setting to discover the international state of the art in these critical global issues and an opportunity to connect across all who work with and rely on soils.

<https://22wcso.org/>

The CSSS is now on Twitter



The CSSS is now on Twitter, Facebook and LinkedIn, so please contact our Social Media Manager, Susan Fisk, to highlight the great research being done by soil scientists in Canada.

<https://groundedinsoils.wordpress.com/>

Call for Papers

Call For Papers for a special issue in Geoderma Regional titled "Transitioning to healthy soils with agroforestry systems". Submission site <https://www.sciencedirect.com/journal/geoderma-regional/about/call-for-papers>

June 2021 Photo Contest Winner

Richard Tingskou
Memorial University of Newfoundland, NL



The photo was taken while surveying a newly converted agricultural site outside of Deer Lake in western Newfoundland. The picture shows an intact boreal podzol recognized by the ash like eluvial layer on top of an iron red B horizon. The photo captures the success in preserving soil horizons after significant land conversion but provides cautionary evidence for future management decisions. When I took up my shovel I was initially really impressed to see intact soil layers. Typical conversion events are much more destructive and typically leave an exposed B horizon. This site was different, there was intact A horizon that even had remnants of an organic or duff layer. After the initial shock had worn off I began to think of the vulnerability of this soil. A soil of mostly sand and silt, low in organic matter (~2%), bare, in a highly precipitous environment, sloping with erosion potential. I could see how management decisions could either create a sustainable agro ecosystem or destroy a now vulnerable environment. I took the picture so that discussions could be started that focus on how boreal ecosystems can sustainably contribute to food security.

Most Recent Photo Contest Winner

Krisztina Mosdossy
McGill University, QU



Krisztina Mosdossy
McGill University
Agriculture & Agri-Food Canada

The image was taken at the IRIA (Initiative interministérielle de recherche en agriculture) project site at the Agriculture and Agri-Food research station in Ste-Clotilde, Québec. The picture shows the deep contrast of lettuce growing on organic soil in an experiment designed to investigate the consequences of adding mulch to these soils.

Krisztina Mosdossy is a Ph.D. Candidate in the Department of Natural Resource Sciences at McGill University and a student researcher at the Saint Jean-sur-Richelieu Research and Development center for Agriculture and Agri-Food Canada. Krisztina investigates the consequences of applying mulch to cultivated organic soils on nematodes in the micro-food web and carbon and nitrogen cycling.

Call for Papers



Call for Papers

Cropping system adaptation for enhanced resilience to climate change in cold climate regions

Understanding how cropping systems may be modified to enhance their resilience to climate change is important to maintain or improve crop yields, ensure food security and protect the environment. In Canada, climate change effects on agriculture are expected to vary depending on the geographical location of the cropping system.

On one hand, climate change is expected to accelerate extreme weather frequency, which is a clear threat to agriculture. On the other hand, climate change is expected to expand the land area under potential agriculture production. This requires that agricultural production is adaptable to ensure cropping systems can pivot to both meet challenges as well as the opportunities driven by a changing climate. This special issue in the *Canadian Journal of Plant Science* will cover all aspects of cropping system research in cold climate regions related to how cropping systems can address the challenges and opportunities of a changing climate.

Structure and Content of the Special Issue

Original research and review articles are invited. Due to the broad nature of the discipline, the Special Issue will consider the following subject areas: Indigenous Agriculture; Agronomy and Crop Management; Soil and Environmental Science; Novel Crops; Crop Physiology and Stress; Integrated Pest Management; Agrometeorology; Modelling; Organic Agriculture; Northern Agriculture; Genotype x Environment Interaction; Water Management. Original research can include field, lab, or greenhouse trials; take place in field settings, controlled, or urban environments. Modelling studies will also be considered.

Manuscript submissions will be peer-reviewed. Authors should follow the instructions and guidelines set by the *Canadian Journal of Plant Science*: cdnsiencepub.com/journal/cjps/authors

Guest Editors

Dr. Joann Whalen, Lead Guest Editor, McGill University

Dr. Helen Booker, Guest Associate Editor, University of Guelph

Dr. Douglas Cattani, Guest Associate Editor, University of Manitoba

Dr. Cameron Wagg, Guest Associate Editor, Agriculture and Agri-Food Canada

Expression of interest deadline April 29, 2022 | Final papers due July 8, 2022

Include your title and name/email of the corresponding author and send to Dr. Ben Thomas and Dr. Joann Whalen at cjps@cdnsiencepub.com

 Canadian Journal of
Plant Science



CANADIAN SOCIETY OF SOIL SCIENCE

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